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Ryan, Mason & Lewis, LLP
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EXAMINER

SHERMAN, STEPHEN G

ART UNIT	PAPER NUMBER
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2629

DATE MAILED: 07/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/622,656

Applicant(s)

FONG ET AL.

Examiner

Stephen G. Sherman

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 and 24-33 is/are pending in the application.
- 4a) Of the above claim(s) 17-23 and 34-37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 8-16, 24, 25 and 27-33 is/are rejected.
- 7) ☒ Claim(s) 4-7 and 26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to the amendment filed the 5 July 2006. Claims 1-16 and 24-33 are pending. Claims 17-23 and 34-37 have been cancelled.

Response to Arguments

2. Applicant's arguments filed the 5 July 2006 with respect to claims 1-3, 8-16, 24-25 and 27-33 have been fully considered but they are not persuasive.

On page 4, third paragraph the applicant argues that the obvious statement given in the rejection of claim 1 is based on the type of "subjective belief and unknown authority" that the Federal Circuit has indicated provides insufficient support for an obviousness rejection, and that the examiner has failed to identify any objective evidence of record which supports the proposed combination. Furthermore, in paragraph five the applicant states that the examiner's conclusory statements do not adequately address the issue of motivation to combine references. The examiner respectfully disagrees.

It is not necessary that the references actually suggest, expressly or in so many words, the changes or improvements that applicant has made. The test for combining references is what the references as a whole would have suggested to one of ordinary skill in the art. In re Sheckler, 168 USPQ 716 (CCPA 1971); In re McLaughlin 170 USPQ 209 (CCPA 1971); In re Young 159 USPQ 725 (CCPA 1968). Moreover, it is

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well know to one of ordinary skill in the art that computing devices used for many years before the invention was made, such as notebook computers, desktop computers, etc., provide the keyboard in a substantially horizontal position with reference to a user, and the display screen in a substantially vertical position with reference to the user, i.e. the keyboard and display are substantially orthogonal. Users have been accustomed to this setup for many years. Therefore, as stated in the rejection, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Liu et al. and NEC such that a user would be provided with this well known computing setup.

On page 5, first paragraph the applicant argues that it is not clear how the single projector device of Liu may be combined with the dual projector device of NEC to generate user input and user output displays onto different surfaces using one projector, and that no guidance was provided in the Office Action as to how the references can be combined to achieve the present invention. The examiner respectfully disagrees.

The examiner was merely using the teachings of NEC to show that the user input and user output could be provided on separate surfaces, the examiner was not physically integrating the dual projectors of NEC into the single projector of Liu. Therefore the examiner was not replacing the single projector of Liu with the dual projectors of NEC. The examiner was only using the idea taught by the secondary reference of having the user input and output on different surfaces to be incorporated with the primary reference.

On page 5, starting the in the second paragraph the applicant argues that the collective teachings of Liu and NEC fails to suggest or to ender obvious at least the elements of independent claim 1. The examiner respectfully disagrees.

On page 5, last paragraph the applicant states "Liu describes a keyboard and a display that are generated on the same surface. NEC discloses a device generating a keyboard on one surface and a display on another surface using two different projectors. The method of independent claim 1 utilizes a single projector to project onto two separate surfaces." The examiner asserts that since the rejection of claim 1 is based on the **combination** of the two references Liu and NEC, that all of the claimed limitations have been met. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

3. Applicant's arguments with respect to claims 4-7 and 26 have been considered but are moot, and the claims are indicated allowable. However, with respect to claim 24 the applicant's arguments are not persuasive. Where claim 4 states that the mirror system reflects a portion of the projected image such that the image is split into a user input display and a user output display, claim 24 does not contain such a limitation meaning that the reflected and nonreflected images could be the same image, which is taught by the Anderson reference.

On page 7, last paragraph the applicant argues the rejection of independent claim 24 for the reasons of which the applicant argued for claims 4-8. With respect to those arguments, the applicant has argued that first the motivation statement is "subjective belief and unknown authority" that the Federal Circuit had indicated provides insufficient support for an obviousness rejection, and secondly there is no reasonable expectation of success being that Anderson is drawn to a helmet mounted display, and last of all that the combined references fail to teach all of the claimed limitations. The examiner respectfully disagrees.

First, it is not necessary that the references actually suggest, expressly or in so many words, the changes or improvements that applicant has made. The test for combining references is what the references as a whole would have suggested to one of ordinary skill in the art. In re Sheckler, 168 USPQ 716 (CCPA 1971); In re McLaughlin 170 USPQ 209 (CCPA 1971); In re Young 159 USPQ 725 (CCPA 1968). Moreover, the purpose of using the Anderson reference was to provide a way for the image to be provided on two different surfaces, therefore what the reference is teaching is in fact the motivation for combining the references.

Secondly, with respect to the argument that there is no expectation of success, although the Anderson reference is stated to be preferably used in a head mounted display, Anderson states in the Abstract and in column 5, lines 14-21 that the invention can be used in a projection display system. Since Anderson describes of splitting an image from a single projector and Liu discloses of two images being projected from a

single projector, then the examiner believes that the expectation of success has been met.

Lastly, with respect to the cited combination failing to teach all the claim limitation, the examiner asserts that since the rejection of claim 24 is based on the **combination** of the references, that all of the claimed limitations have been met. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

On page 7, second paragraph, the applicant argues the rejection of claims 12-16 based on the fact that Liu and NEC fail to teach the limitations of claim 1, that Rafii cannot cure the deficiencies and thus claims 12-16 define patentable subject matter. Since the examiner has stated above the reasons why Liu and NEC disclose the limitations of claim 1, the addition of Rafii means that the cited references thus teach the limitations of claims 12-16.

On page 8, at the top of the page the applicant states that claims 25 and 27-32 are patentable based on their dependency from claim 24, however since the examiner has stated reasons why Liu, Anderson and NEC disclose the claimed limitations of claim 24, the rejections for claims 25 and 27-32 are still valid.

On page 8, first paragraph the applicant argues that claim 33 is patentable because it is dependent from claim 24, and thus Rafii cannot cure the deficiencies of the references, however since the examiner has stated reasons why Liu, Anderson and

NEC disclose the claimed limitations of claim 24, the addition of Rafii means that the cited references thus teach the limitations of claim 33.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1-3 and 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu et al. (US 2004/0125147) in view of the NEC Corporation & NEC Design, Ltd. Webpage.

Regarding claim 1, Liu et al. disclose a method of providing a user interface for a computing device (Figure 1, item 301 and paragraph [0019]), comprising the steps of:

projecting a user input display from a projector of the computing device onto a surface (Figure 1, item 301 and paragraphs [0014-0015]); and

projecting a user output display from the projector of the computing device onto a surface (Figure 1, item 102 and paragraphs [0014-0015]).

Liu et al. fail to teach of a method for providing a user interface for a computing device wherein the surfaces for the user input and output display and are disposed in different planes.

The NEC Corporation & NEC Design, Ltd. Webpage teaches of a method for providing two projected displays on surfaces disposed in different planes (Pages 4-5, the P-ISM shows the ability to project a display one a surface in one plane while projecting a user input on a surface in a different plane.).

Therefore it would have been obvious to "one of ordinary skill" in the art at the time the invention was made to use the idea of projecting images in different planes as taught by The NEC Corporation & NEC Design, Ltd. Webpage with the computing device taught by Liu et al. such that the computing device would project the user input and output displays from the projector onto two different surfaces in order to provide for an improved personal information terminal that provides the user with a standard computer setup that user's are accustomed to.

Regarding claim 2; Liu et al. and The NEC Corporation & NEC Design, Ltd. Webpage disclose the method of claim 1.

Liu et al. also disclose wherein the computing device is a pervasive computing device (Paragraph [0021]. The examiner interprets that since it is stated that the device does not occupy space that the device would be a pervasive device.).

Regarding claim 3, Liu et al. and The NEC Corporation & NEC Design, Ltd.

Webpage disclose the method of claim 1.

Liu et al. also disclose wherein the user input display and the user output display are originally projected as a single image from a single projector (Paragraph [0015] reveals that the display and keyboard image are generated by a single projector, laser emitter 201 shown in Figure 2. The examiner interprets that since only the laser emitter 201 generates the image that the keyboard and display would be generated as a single image.).

Regarding claim 8, Liu et al. and the NEC Corporation & NEC Design, Ltd.

Webpage disclose the method of claim 1.

Liu et al. does not explicitly teach of the method wherein the projector is a micro projector. However, from paragraph [0021] the examiner understands that the device is very small since it is said to not occupy space, such that the projecting laser emitter 201 would be a micro laser emitter.

Regarding claim 9, Liu et al. and The NEC Corporation & NEC Design, Ltd.

Webpage disclose the method of in claim 1.

The NEC Corporation & NEC Design, Ltd. Webpage also discloses a method wherein the first surface is in a plane disposed in front of the computing device, the second surface is in a plane disposed behind the computing device, and the second surface is orthogonal to the first surface (Pages 4-5, the P-ISM projects the user input keyboard onto the surface in front of the device and the user output display behind the device with the two surfaces being orthogonal, as shown in the pictures.).

Regarding claim 10, Liu et al. and The NEC Corporation & NEC Design, Ltd. Webpage disclose the method of claim 1.

Liu et al. also disclose wherein the user input display comprises an image of a keyboard (Figure 1, item 301).

Regarding claim 11, Liu et al. and The NEC Corporation & NEC Design, Ltd. Webpage disclose the method of claim 1.

The NEC Corporation & NEC Design, Ltd. Webpage also discloses to teach of a method wherein the first surface is a horizontal surface and the second surface is a vertical surface (Pages 4-5, the P-ISM projects the user input keyboard onto a horizontal surface and the user output display onto a vertical surface, as shown in the pictures.).

7. Claims 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu et al. (US 2004/0125147) in view of the NEC Corporation & NEC Design, Ltd. Webpage and further in view of Rafii et al. (US 6,414,422).

Regarding claim 12, Liu et al. and the NEC Corporation & NEC Design, Ltd. Webpage disclose the method of claim 1.

Liu et al. and the NEC Corporation & NEC Design, Ltd. Webpage fail to teach of a method further comprising the step of providing audio feedback from the computing device in response to intercepting sensors of the virtual keystroke detection system, over a virtual key in the user input display.

Rafii et al. disclose of a method further comprising the step of providing audio feedback from a computing device in response to intercepting sensors of a virtual keystroke detection system, over a virtual key in a user input display (Column 6, lines 42-58).

Therefore it would have been obvious to "one of ordinary skill" in the art at the time the invention was made to use the audio feedback method taught by Rafii et al. with the computing device taught by the combination of Liu et al. and the NEC Corporation & NEC Design, Ltd. Webpage in order to provide feedback to the user that a key was pressed.

Regarding claim 13, Liu et al. and the NEC Corporation & NEC Design, Ltd. Webpage disclose the method of claim 1.

Liu et al. and the NEC Corporation & NEC Design, Ltd. Webpage fail to teach of a method further comprising the step of providing visual feedback on the user output display in response to intercepting sensors of the virtual keystroke detection system, over a virtual key of the user input display.

Rafii et al. disclose of a method further comprising the step of providing visual feedback on a user output display in response to intercepting sensors of a virtual keystroke detection system, over a virtual key of a user input display (Column 4, lines 34-50).

Therefore it would have been obvious to "one of ordinary skill" in the art at the time the invention was made to use the visual feedback method taught by Rafii et al. with the computing device taught by the combination of Liu et al. and the NEC Corporation & NEC Design, Ltd. Webpage in order to provide feedback to the user that a key was pressed.

Regarding claim 14, Liu et al. and the NEC Corporation & NEC Design, Ltd. Webpage disclose the method of claim 1.

Liu et al. and the NEC Corporation & NEC Design, Ltd. Webpage fail to teach of a method further comprising the step of providing visual feedback on the user input display in response to intercepting sensors of the virtual keystroke detection system, over a virtual key of the user input display.

Rafii et al. disclose of a method further comprising the step of providing visual feedback on a user input display in response to intercepting sensors of a virtual keystroke detection system, over a virtual key of a user input display.

Therefore it would have been obvious to “one of ordinary skill” in the art at the time the invention was made to use the visual feedback method taught by Rafii et al. with the computing device taught by the combination of Liu et al. and the NEC Corporation & NEC Design, Ltd. Webpage in order to provide feedback to the user that a key was pressed.

Regarding claim 15, Liu et al. and the NEC Corporation & NEC Design, Ltd. Webpage disclose the method of claim 1.

Liu et al. and the NEC Corporation & NEC Design, Ltd. Webpage fail to teach of a method wherein the user input display comprises an image of a scratch pad.

Rafii et al. disclose of a method wherein the user input display comprises an image of a scratch pad (Column 6, lines 33-41. The examiner interprets that the scratch pad would be enabled when the control and shift keys are pressed.).

Therefore it would have been obvious to “one of ordinary skill” in the art at the time the invention was made to use the scratch pad taught by Rafii et al. with the computing device taught by the combination of Liu et al. and the NEC Corporation & NEC Design, Ltd. Webpage in order to allow for the user to draw a line, a signature, or other graphic.

Regarding claim 16, Liu et al. and the NEC Corporation & NEC Design, Ltd. Webpage disclose the method of claim 1.

Liu et al. and the NEC Corporation & NEC Design, Ltd. Webpage fail to teach wherein the user input display comprises an image of a pointing device.

Rafii et al. disclose of a method wherein the user input display comprises an image of a pointing device (Column 6, lines 33-41. The examiner interprets that the pointing device would be enabled when the control and shift keys are pressed.).

Therefore it would have been obvious to “one of ordinary skill” in the art at the time the invention was made to use the pointing device taught by Rafii et al. with the computing device taught by the combination of Liu et al. and the NEC Corporation & NEC Design, Ltd. Webpage in order to allow for the user to move a cursor around to draw a line, a signature, or other graphic.

8. Claims 24-25 and 27-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu et al. (US 2004/0125147) in view of Anderson (US 4,575,722) and further in view of the NEC Corporation & NEC Design, Ltd. Webpage.

Regarding claim 24, Liu et al. disclose a computing device, comprising:
a projector that projects an image (Figure 2, item 101 contains laser emitter 201.); and
wherein a projected image provides a virtual user interface for a computing device (Figure 1, items 101, 102, and 301).

Liu et al. fail to teach of a computing device comprising: a mirror system disposed in accordance with the projector, wherein the mirror system reflects a portion of the image from the projector, projecting a nonreflected portion of the image to a first surface and a reflected portion of the image to a second surface.

Anderson discloses of a device comprising:

a mirror system (Figure 1, item 18 and column 3, lines 28-39),

wherein the mirror system reflects a portion of an image from a projector (Figure 1, item 40' and column 4, lines 38-48), projecting a nonreflected portion of the image to a first surface (Figure 1, items 40'' and 20, and column 4, lines 38-48) and a reflected portion of the image to a second surface (Figure 1, items 40' and 20, and column 4, lines 38-48).

Therefore it would have been obvious to "one of ordinary skill" in the art at the time the invention was made to use mirror system taught by Anderson with the computing device taught by Liu et al. in order to simultaneously view both images on different surfaces.

Liu et al. and Anderson fail to teach that the first surface and the second surface are disposed in different planes.

The NEC Corporation & NEC Design, Ltd. Webpage discloses of a computing device comprising a projector, wherein the first surface and the second surface are disposed in different planes (Pages 4-5, the P-ISM shows the ability to project a display one a surface in one plane while projecting a user input on a surface in a different plane.).

Therefore it would have been obvious to "one of ordinary skill" in the art at the time the invention was made to use the idea of projecting images in different planes as taught by The NEC Corporation & NEC Design, Ltd. Webpage with the computing device taught by the combination of Liu et al. and Anderson, such that the computing device would project the user input and output displays from the projector onto two different surfaces using a mirror system, in order to provide for an improved personal information terminal that provides the user with a standard computer setup that user's are accustomed to.

Regarding claim 25, Liu et al., Anderson and the NEC Corporation & NEC Design, Ltd. Webpage disclose the computing device of claim 24.

Liu et al. also disclose wherein the computing device is a pervasive computing device (Paragraph [0021]. The examiner interprets that since it is stated that the device does not occupy space that the device would be a pervasive device.).

Regarding claim 27, Liu et al., Anderson and the NEC Corporation & NEC Design, Ltd. Webpage disclose the computing device of claim 24.

Liu et al. does not explicitly teach of the method wherein the projector is a micro projector. However, from paragraph [0021] the examiner understands that the device is very small since it is said to not occupy space, such that the projecting laser emitter 201 would be a micro laser emitter.

Regarding claim 28, Liu et al., Anderson and the NEC Corporation & NEC Design, Ltd. Webpage disclose the computing device of claim 24.

The NEC Corporation & NEC Design, Ltd. Webpage also discloses wherein a portion of the image is projected in front of the pervasive computing device between the computing device and the user (Pages 4-5 shows a portion of the image being the user input keyboard as being projected in front of the device.).

Regarding claim 29, Liu et al., Anderson and the NEC Corporation & NEC Design, Ltd. Webpage disclose the computing device of claim 24.

Liu et al., Anderson and the NEC Corporation & NEC Design, Ltd. Webpage fail to explicitly teach wherein the reflected portion of the image is projected behind the computing device. However, given the combination as presented in the rejection of claim 24, the combined system would project a portion of the image behind the device and a portion of the image in front of the image as shown on the NEC Corporation & NEC Design, Ltd. Webpage (Pages 4-5) and the portion reflected behind the device would be the user output display which would be a reflected portion of the display.

Regarding claim 30, Liu et al., Anderson and the NEC Corporation & NEC Design, Ltd. Webpage disclose the computing device of claim 24.

The NEC Corporation & NEC Design, Ltd. Webpage discloses of a device wherein a first surface is perpendicular to a second surface (Pages 4-5, the picture

shows that the user input projected on the first surface which is perpendicular to the user output that is projected on a second surface.).

Regarding claim 31, Liu et al., Anderson and the NEC Corporation & NEC Design, Ltd. Webpage disclose the computing device of claim 24.

Liu et al. also disclose wherein a portion of the projected image comprises a virtual keyboard image (Figure 1, item 301).

Regarding claim 32, Liu et al., Anderson and the NEC Corporation & NEC Design, Ltd. Webpage disclose the computing device of claim 24.

Liu et al. also disclose wherein a portion of the projected image comprises a user output display (Figure 1, item 102).

9. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liu et al. (US 2004/0125147) in view of Anderson (US 4,575,722) and further in view of and the NEC Corporation & NEC Design, Ltd. Webpage and Rafii et al. (US 6,614,422).

Regarding claim 33, Liu et al., Anderson and the NEC Corporation & NEC Design, Ltd. Webpage disclose the computing device of claim 24.

Liu et al., Anderson and the NEC Corporation & NEC Design, Ltd. Webpage fail to teach of the computing device further comprising a key feedback mechanism.

Rafii et al. disclose a virtual keyboard comprising a key feedback mechanism (Column 6, 42-58. The examiner interprets that if the device can provide feedback to the user that it would contain a feedback mechanism.).

Therefore it would have been obvious to "one of ordinary skill" in the art at the time the invention was made to use the key feedback mechanism taught by Rafii et al. with the computing device taught by the combination of Liu et al., Anderson and the NEC Corporation & NEC Design, Ltd. Webpage in order to provide feedback to the user that a key was pressed.

Allowable Subject Matter

10. Claims 4-7 and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen G. Sherman whose telephone number is (571) 272-2941. The examiner can normally be reached on M-F, 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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17 July 2006

AMR A. AWAD
PRIMARY EXAMINER

A handwritten signature in black ink, appearing to read "Amr A. Awad", with a large, sweeping flourish at the end.